REMARKS

Reconsideration and withdrawal of the rejections of the application are respectfully requested in view of the amendments and remarks herewith, which place the application into condition for allowance.

I. STATUS OF CLAIMS AND FORMAL MATTERS

Claims 1-18 are now pending. Claims 1-3 and 5-15 were amended, without prejudice and new claims 16-18 are added. Claim 4 is canceled without prejudice.

No new matter is added by this amendment.

It is submitted that these claims are patentably distinct from the prior art cited by the Examiner, and that these claims are in full compliance with the requirements of 35 U.S.C. §112. The amendments and remarks herein are not made for the purpose of patentability within the meaning of 35 U.S.C. §§ 101, 102, 103 or 112; but rather the amendments and remarks are made simply for clarification and to round out the scope of protection to which Applicants are entitled.

Support for the amended recitations in the claims and for the new claim is found throughout the specification and from the pending claims. More specifically, support for the amended recitation in claims 7 and 8 are found in the specification on page 5, line 10.

II 35 U.S.C. §101 REJECTIONS

Claim 15 was rejected under 35 U.S.C. §101 as allegedly improperly reciting a use. The rejection is traversed.

The amendment to claim 15 has rendered the rejections moot.

Consequently, reconsideration and withdrawal of the Section 101 rejections are respectfully requested.

III. 35 U.S.C. §112, SECOND PARAGRAPH, REJECTIONS

Claims 7, 8, 13, and 15 were rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite. The rejections are traversed.

The amendments to the claims, without prejudice, have rendered the rejections moot.

Consequently, reconsideration and withdrawal of the Section 112, second paragraph, rejections are respectfully requested.

IV. 35 U.S.C. §§ 102 AND 103 REJECTIONS

Claim 10 is rejected under 35 U.S.C. §102(b) as allegedly being anticipated by Kruth (Arteriosclerosis, 1984); and claims 1-9 and 15 were rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over the Pizzato et al., *Journal of Virology*, **1999**; 8599-8611, in view of Kruth. In addition, claims 10-14 were rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Pizzato et al. in view of Kruth, further in view of Zuk et al. (U.S. Patent No. 4,281,061). The rejections will be collectively addressed and are respectfully traversed. The cited documents do not teach, suggest or motivate a skilled artisan to practice the instantly claimed invention.

It is respectfully pointed out that a two-prong inquiry must be satisfied in order for a Section 102 rejection to stand. First, the prior art reference must contain all of the elements of the claimed invention. *See Lewmar Marine Inc. v. Barient Inc.,* 3 U.S.P.Q.2d 1766 (Fed. Cir. 1987). Second, the prior art must contain an enabling disclosure. *See Chester v. Miller,* 15 U.S.P.Q.2d 1333, 1336 (Fed. Cir. 1990). A reference contains an enabling disclosure if a person of ordinary skill in the art could have combined the description of the invention in the prior art reference with his own knowledge of the art to have placed himself in possession of the invention. *See In re Donohue*, 226, U.S.P.Q. 619, 621 (Fed. Cir. 1985).

It is also well-settled that there must be some prior art teaching which would have provided the necessary incentive or motivation for modifying the reference teachings. *In re Laskowski*, 12 U.S.P.Q. 2d 1397, 1399 (Fed. Cir. 1989); *In re Obukowitz*, 27 U.S.P.Q. 2d 1063 (BOPAI 1993). Further, "obvious to try" is not the standard under 35 U.S.C. §103. *In re Fine,* 5 U.S.P.Q. 2d 1596, 1599 (Fed. Cir. 1988). And, as stated by the Court in *In re Fritch*, 23 U.S.P.Q. 2d 1780, 1783-1784 (Fed. Cir. 1992): "The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggests the desirability of the modification." Also, the Examiner is respectfully reminded that for the Section 103 rejection to be proper, **both the suggestion of the claimed invention and the expectation of success must be founded in the prior art, and not Applicants' disclosure**. *In re Dow*, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988).

Applying the law to the instant facts, the instant invention is not anticipated by Kruth. Further, the requisite suggestion or motivation is lacking in Pizzato, thereby rendering the obviousness rejection based on its combination with Kruth equally defective.

Claim 10 provides a kit of parts for quantifying viral or bacterial particles having a cholesterol-containing envelope, which comprises a fluorogenic polyene macrolide and fluorescent particles as a reference standard.

Kruth relates to filipin staining of sudanophilic lipid deposits and not to quantifying viral or bacterial particles having a cholesterol containing envelop. Specifically, Kruth stains lipid deposits in human artherosclerotic lesions by means of filipin. Further, Kruth does not disclose fluorescent particles as a reference standard.

As Kruth does not contain each and every element of the claimed invention, the anticipation rejection must fail as a matter of law.

Claims 1-9 and 15 was were rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Pizzato in view of Kruth.

The present invention provides for, *inter alia*, a method of quantifying viral particles having a cholesterol-containing envelope comprising the steps of: staining the particles with a fluorogenic polyene macrolide and quantitatively determining fluorescence signals of the individual particles by counting the fluorescence signals under a fluorescence microscope to provide a particle number.

Pizzato relates to detecting and quantifying MLV vectors and HIV-1 particles with fluorescent antibodies and immunofluorescence microscopy. Unlike the present invention, Pizzato stains viral particles by means of labeled secondary antibodies bound to antibodies bound to viral particles. By contrast, the present invention provides antibody-independent staining. Specifically, the present invention provides filipin for staining, which binds directly to cholesterol of an external envelope of retroviruses and other envelope viruses. (Page 2, lines 27-30). Such an invention is neither taught nor suggested in, nor enabled by, Pizzato in combination with Kruth.

Kruth does not remedy the inherent deficiencies present in Pizzato. As mentioned above, Kruth relates to the use of filipin to stain lipid deposits in human artherosclerotic lesions and not viral particles. Thus, the instant invention is neither taught nor suggested in, nor enabled by, Pizzato in combination with Kruth.

Further, while Pizzato provides for immunofluorescence microscopy, filipin has not been used for quantifying viral particles by means of fluorescence using a fluorescence microscope. One skilled in the art of filipin staining would use an electron microscope, and not a light microscope, for quantifying particles because the actual diameter of viruses is below the

resolution of light. (Alberts et al, *Molecular Biology of Cells*, Verlag Chemie, (1997) (Attached)). Specifically, filipin staining has been used with an electron microscope and not a light microscope. (Majuk Z et al., *Effects of Filipin on the Structure and Biological Activity of Enveloped Viruses*, J. Virol. 24: 883-892 (1977) and Feltkamp C.A. et al., *Membrane-Associated Proteins Affect The Formation of Filipin-Cholesterol Complexes In Viral Membranes*, Exp Cell. Res. 140L 289-297 (1982)). Thus, a skilled artisan would not be motivated to combine Pizzato teachings with that of Kruth in order to practice the instantly claimed invention.

The Examiner is respectfully reminded that picking and choosing portions from disparate references in order to formulate an obviousness rejection is impermissible and that "obvious to try" is not the standard by which an obviousness rejection should be based. And as "obvious to try" would be the only standard that would give the instant Section 103 rejection credence, the rejection must fail as a matter of law.

Claims 10-14 were rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Pizzato et al. in view of Kruth, further in view of Zuk et al. (U.S. Patent No. 4,281,061). Zuk is relied upon solely that it allegedly teaches that reagents for an assay can be provided as kits as a matter of convenience and to optimize sensitivity of the assay in the range of interest. (*Office Action*, at 8-9). The rejection based on the additional reference to Zuk should be withdrawn in view of the foregoing discussion.

Consequently, reconsideration and withdrawal of the Section 102 and 103 rejections are warranted and respectfully requested.

CONCLUSION

By this Amendment, the instant claims should be allowed; and this application is in condition for allowance. Favorable reconsideration of the application, withdrawal of the rejections, and prompt issuance of the Notice of Allowance are, therefore, all earnestly solicited.

Respectfully submitted,
FROMMER LAWRENCE & HAUG LLP

By: 

Ronald R. Santucci
Reg. No. 28,988
Tel: (212) 588-0800
Fax: (212) 588-0500

Titel der Originalausgabe: Molecular Biology of the Cell, Third Edition

Übersetzung herausgegeben von
Prof. Dr. Lothar Jaenicke
Institut für Biochemie der Universität zu Köln
An der Bottmühle 2
D-50678 Köln

Lothar Jaenicke promovierte nach Studium von Botanik, Chemie und Medizin in der Chemie und habilitierte sich an der Philipps-Universität Marburg. Er war 1963 Gründer und bis 1988 Direktor des Instituts für Biochemie der Universität zu Köln.

1. Auflage 1986
1. Nachdruck 1988
2. Nachdruck 1989
2. Auflage 1990
1. Nachdruck 1991
2. Nachdruck 1994
3. Auflage 1995
1., korrigierter Nachdruck 1997

Lektorat: Hans-Joachim Kraus und Karen Weber
Herstellerische Betreuung: Dipl.Wirt.-Ing. (FH) Hans-Jochen Schmitt

Titelbild: Prometaphase in einer typischen tierischen Zelle.
(Weiteres siehe Abb. 18–8, S. 1084; Photographie mit freundlicher Genehmigung von
C.L. Rieder, J.C. Waters und R.W. Cole.)

Die Deutsche Bibliothek – CIP-Einheitsaufnahme

Molekularbiologie der Zelle / Bruce Alberts ... Übers. von Lothar Jaenicke (Leitung) ... –
3. Aufl. – Weinheim ; New York ; Basel ; Cambridge ; Tokyo : VCH, 1995
Einheitssacht.: Molecular biology of the cell <dt.>

ISBN 3-527-30055-4
NE: Alberts, Bruce; EST

Satz: Hagedorn GmbH, D-68519 Viernheim
Druck und Bindung: Passavia Druckerei, D-94036 Passau
Printed in the Federal Republic of Germany

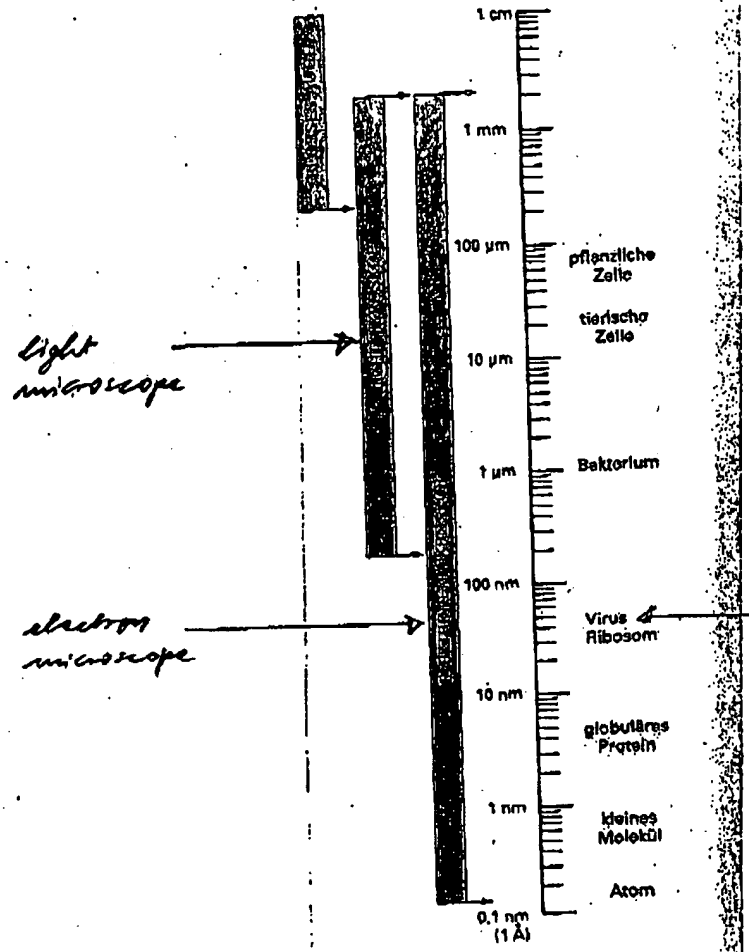

Abb. 4–1 Auflösungsvermögen. Abmessungen von Zellen und ihren Komponenten in logarithmischem Maßstab, mit Angabe des Auflösungsbereiches für Objekte, die mit dem bloßen Auge, bzw. durch das Licht- und das Elektronenmikroskop deutlich sichtbar sind. Die folgenden Längeneinheiten werden allgemein in der Mikroskopie verwendet:
µm (Mikrometer) = 10^{-6} m
nm (Nanometer) = 10^{-9} m
Å (Ångström-Einheit) = 10^{-10} m

Quelle:
Atoms of Life: Molekularbiologie der Zelle, VCH, 1997

page 162.